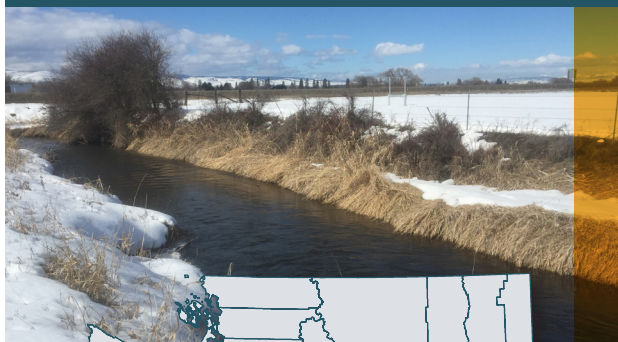


Naneum Creek

APRIL 2021

Summary of 2019 Surface Water Monitoring Program Results



WSDA selected the watershed to represent hay production (specifically timothy hay) and mixed agricultural land use in the heavily irrigated Kittitas Valley. Coleman Creek drains into Naneum Creek 1 mile upstream from the Naneum sampling location.

Results:

- There were 199 detections in Naneum Creek. Of these, one imidacloprid detection was above WSDA assessment criteria.
- When multiple pesticides are detected simultaneously, the environmental effects can combine; multiple pesticides were detected every week Naneum Creek was tested. Between four to 22 pesticides were detected at each sampling visit
- WSDA identifies some pesticides as Pesticides of Concern (POC) when they have been detected above WSDA's assessment criteria and above certain detection frequencies.

Watershed and site information:

In 2019, Washington State Department of Agriculture (WSDA) monitored 16 sites in Washington. Naneum was the only monitoring site located in Kittitas County.

Years sampled: 2017 – 2019

Fish habitat:

Spring Chinook salmon, coho salmon, and summer steelhead (SalmonScape: apps.wdfw.wa.gov/salmonscape)

Sampling dates:

13 weeks, April 2 – September 17, once every two weeks

Water testing:

- Samples were analyzed at the Manchester Environmental Lab, Port Orchard, Wash.
- 159 current and legacy chemicals (56 insecticides, 58 herbicides, 21 fungicides, 19 pesticide degradates, 2 synergists, 1 antimicrobial, 1 insect repellent, and 1 wood preservative)
- WSDA compares detected pesticide concentrations to WSDA assessment criteria, which are half of state and federal water quality criteria. Each pesticide has its own assessment criteria, based on its toxicity to aquatic animals, insects, and plants.

Statewide POCs detected in Naneum Creek:

ICONS FOR ENVIRONMENTAL HAZARDS LISTED ON PESTICIDE LABELS



Chlorpyrifos



- **Common trade names:** Lorsban, Pilot, Vesper
- **Example uses within watershed:** alfalfa, timothy hay, sunflower, wheat
- Chlorpyrifos is banned in California, New York, Hawaii, Maryland and the European Union.
- A streamside no-spray buffer zone is required in Washington for chlorpyrifos to protect threatened and endangered Pacific salmon and steelhead.
- Detected at 10 sites in 2019. A watershed-specific POC at six of them.

Imidacloprid



- **Common trade names:** Admire Pro, Gaucho, Merit
- **Example uses within watershed:** oat, sunflower, wheat, outside buildings, residential
- Detected at 11 sites in 2019. A watershed POC at nine of them.



NATURAL RESOURCES ASSESSMENT SECTION

Products listed are for descriptive purposes only and do not imply endorsement by the author or the Department of Agriculture.

The calendar at right shows the concentration in µg/L and date sampled of each statewide POC detected. This calendar does not include all the pesticides WSDA found during the growing season. Detected concentrations that exceed WSDA's assessment criteria have a higher potential to cause harm to aquatic ecosystems.

[* I: Insecticide]

exceeds assessment criteria

below assessment criteria



Recommendations:

Make use of natural protections

- Use buffers, filter strips, sediment basins, ground cover, and setbacks.
- Maintain vegetation along creeks and take care during spring time applications before vegetation along streams leaves out.

Be informed

- Read and follow pesticide label directions.
- Check the weather forecast to reduce the chances of drift or runoff.
- Review WSDA's Pesticides of Concern and choose less-toxic pesticides when possible.

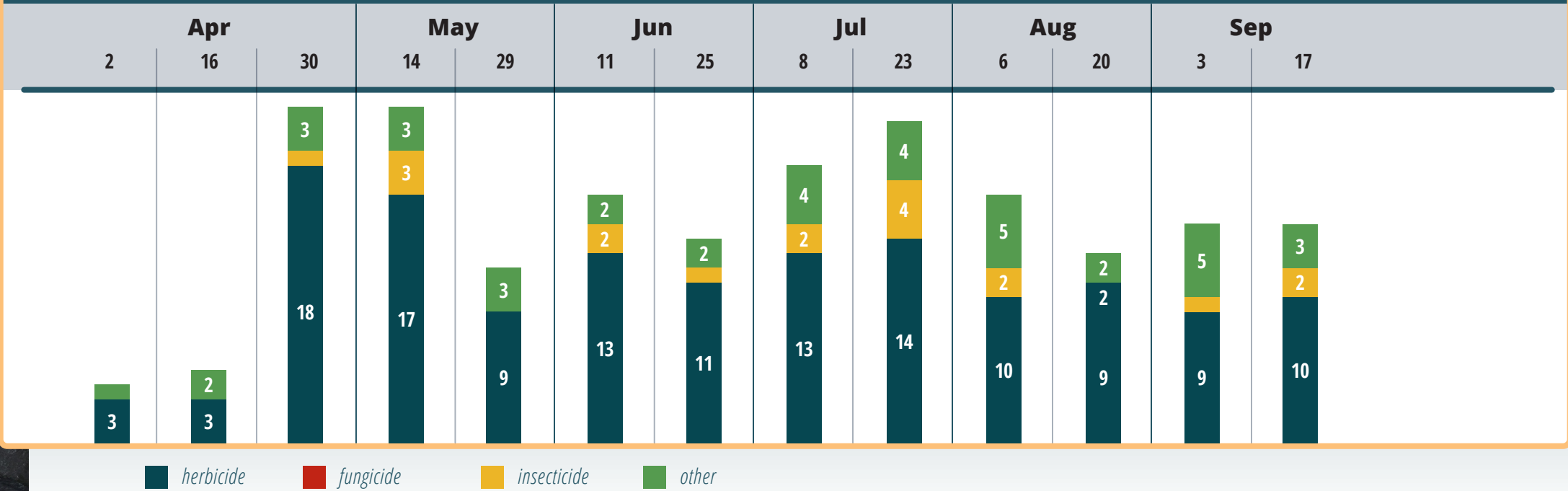
Care for your equipment and products

- Calibrate, maintain, and inspect application equipment.
- Properly dispose of all unneeded pesticides. Visit agr.wa.gov/wastepesticide to learn about waste pesticide collection events.

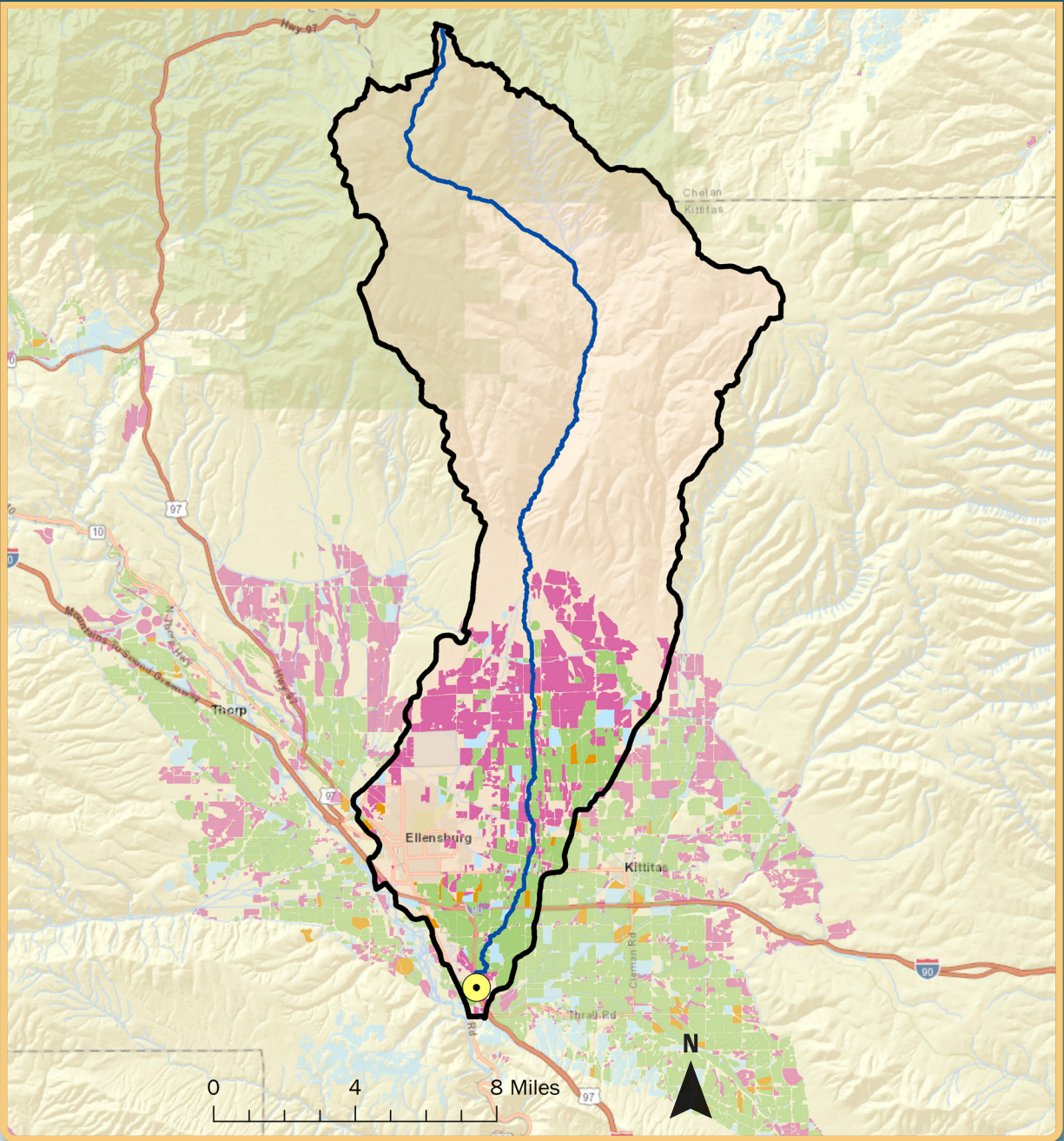
Statewide Pesticides of Concern Detected and Their Corresponding Sampling Date and Concentration

Month		Apr			May		Jun		Jul		Aug		Sep	
Day of the Month	Use*	2	16	30	14	29	11	25	8	23	6	20	3	17
Chlorpyrifos	I									0.003				
Imidacloprid	I							0.017						
Total suspended solids (mg/L)		22	22	21	35	32	19	6	27	6	6	6	6	11
Streamflow (cubic ft/sec)		70.5	86.6	65.7	101.6	138.7	60.4	41.4	64.7	23.7	47.8	67.5	60.7	88.8
Precipitation (total in/week)		0	0.06	0	0	0.19	0	0	0	0	0	0	0.03	0.19

Total Number of Detections per Sampling Event by Pesticide Category



Please see agr.wa.gov/AgScience for more information.



Naneum Creek crop groupings | acres

■	Other	996
■	Cereal Grain	432
■	Hay / Silage	8,454
■	Pasture	10,679

● Sampling Location

— Naneum Creek

Naneum Watershed

Total Agriculture 20,561 acres

Watershed Total 113,859 acres

To view mapped crop groups at the field scale, download the WSDA Agricultural Land Use data or view the interactive web map here:
<https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use>